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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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George A. Trautenberg

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PATENT ADMINISTRATOR  
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EXAMINER

LITHGOW, THOMAS M

ART UNIT

PAPER NUMBER

1724

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/02/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/014,898

Applicant(s)

TRAUBENBERG ET AL.

Examiner

Thomas M. Lithgow

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,6-10,16-22 and 25-32 is/are pending in the application.
- 4a) Of the above claim(s) none is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,6-10,16-22 and 25-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

THOMAS M. LITHGOW  
PRIMARY EXAMINER  
1724

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 17, line 2, "the frame" has no antecedent basis.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 8-10, 20-25, 27-28, 30, and 32 rejected under 35 U.S.C. 102(b) as being anticipated by Wood (US 4367410). Wood '410 discloses an apparatus for treating wastewater which is considered a module with a UV tube assembly 40 being supported by opposed first and

second side plates 24 and 26 along with top and bottom plates 28, 30 being connected to larger transverse baffles 14 and 18. As shown in fig. 1, 2, 4 and 5 there are a pair of seals along the outer wall of baffles 14 and 18 as well as seals along the underside of bottom plate 30 (fig. 5). As the baffles 14 and 18 are considered the "third support member" and the "seal" seals between the module and a "second surface" (the open channel 12) then it is clear claim 1 reads on the Wood '410 disclosure. In regard to claim 22, the baffles 14 and 18 were placed into the channel 12 at some point and as such they are considered "movable". It is noted that "movable" is a functional limitation which is the same as asserting an element is capable of that function. In regard to claim 33, the confining element is the baffle 14 and/or 18. The Wood '410 device clearly has a center-to-center distance between adjacent UV tubes (radiation source). Further, there is a distance between the UV tubes and the baffle. It is clear that the ratio of these two distances, both unspecified in Wood '410, is a fraction which can be considered "predetermined". Applicant asserts that baffles 14 and 18 do not interconnect the side plates 24 and 26 as alleged by the examiner. This is not persuasive. As shown in fig. 4 of Wood '410 the side plate 24 is shown to extend between baffles 14 and 18. Further, the specification of

Wood '410 clearly recites that the "Inner housing 22 includes a pair of side plates 24, 26, a top plate 28 and a bottom plate 30 arranged about the periphery of ports 16, 20 and welded or otherwise connected at their edges to each other AND to the front and rear baffles 14, 18."-Col. 3, lines 54-63.

The unnumbered seals are noted to be along the edge of the baffles 14 and 18 and do not allow any water to get around the edge of the baffle(s) but must flow through the inlet port 16 into the inner housing 22 for treatment- col. 3, lines 45-47. They are best seen in Fig. 5 and are represented by 45 degree alternating parallel thin and heavy lines which as is well known represents a section of synthetic resin or plastic. In regard to claim 22, applicant asserts that the confining element is movable during flow of the fluid. The baffles 14 and 18 of Wood '410 are capable of being moved while the fluid flows and therefore meet the limitation of the claim (even if no structure to move the baffles is disclosed).

5. Claims 22, and 24-25 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 99/14161. . WO '161 is the PCT equivalent (written in German) of US 6576189 cited by applicant in IDS of 06 Dec 2004.

Reference being made to US '189 therein is disclosed a UV (radiation) module having a movable confining element 24 (damming wall) which

when in the lowered or closed position (fig. 2) acts to channel the water to the UV module. Applicant asserts that Wedekamp (WO '161) discloses placement of the radiation sources downstream of the confining element. It appears in the drawing of WO '161 that the UV tubes are directly below the confining element (24, 28, 30) and also in the "closed zone" (reduced water height) as recited in claim 22. The rejection is maintained.

6. Claims 22, 25, 27-28 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Schuerch (US 5564765). Schuerch '765 discloses plural UV radiation modules 16 oriented in a channel and supported therein by "suspenders" 24 which extend across the channel and engage and/or guide the modules into and/or out of the channel where they act upon the contaminated water in the channel. In figure 1, it is noted that there are gates 13 and 15 which act as a "confining element". The gates connect to the channel and the modules connect to the channel via said suspenders and as such they are connected to each other via the recited structure and are therefore considered "integral". In regard to the "spacer module" of claim 30, it is noted, as illustrated in fig. 1, there are three modules across and six modules deep. A "spacer module" reads on a regular module as a regular module maintains the space between the first and third modules in

any row or column. It is noted that the "closed zone" of claim 22 is not recited as being directly below the confining member but merely a zone created by the confining member. As such, applicant's argument is not consistent with the scope of the claim. The rejection is maintained.

7. Claims 22, 25-26 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Maarschalkerweerd (US 5418370).

Maarschalkerweerd (US 5418370) discloses a fig. 3 embodiment in which there are two adjacent modules with a common "confining element" 104 or a secondary confining element of 150. Applicant asserts there is no movable structure during fluid flow. Structure 104 is not disclosed as being movable. However, to anticipate applicant's claim, the structure merely need be capable of movement during fluid flow. With appropriately sized machinery the structure 104 could be moved during fluid flow.

8. Claims 1, 6-10, 16-18, 20-22 and 25-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Blatchley (US 5952663). Blatchley '663 discloses plural UV modules with an upper header 26, a lower header 20 and legs 22 extending between the upper header and lower header (third support member). The legs 22 have a seal shown in any one of figs. 12-16 which restricts the liquid flow from bypass the module by flowing

outside of sheet 25 which defines the edge of the module. The ballast(s)-  
(power supply) 102 is located in the upper header 26 (col. 5, line 40).  
Various confining members 21, 27, 22, 212 are employed to cause the  
liquid to flow nearer the UV tubes.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the  
basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable  
over either one of Wood '410 or Blatchley '663 as applied to claim 10  
above, and further in view of Elner (US 4899056). Elner '056 teaches the  
use of "blocking plates" 20 employed to stop the flow in the channel when  
the UV modules are being replaced and/or rejuvenated. This feature allows  
the restraint of untreated water to flow through the system which results in a  
better-sanitized effluent. To employ such a feature in Wood '410 or  
Blatchley '663 during servicing of his module would have been obvious in  
view of Elner's ('056) teaching to employ such a feature.



11. Claims 6, and 17 are is rejected under 35 U.S.C. 103(a) as being unpatentable over Wood '410 as applied to claims 1, and 10 respectively above, and further in view of Maarschalkerweerd (US 4872980). The use of a "power supply" (actually a ballast) in the frame of the UV module as a wire reducing and control panel reduction measure (col. 4, lines 18-25) is taught by Maarschalkerweerd '980. To so employ this feature in Wood '410 would have been obvious to one of ordinary skill in the art.

12. Claim 7, 18 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood '410 as applied to claims 1, 10, and 22 respectively above, and further in view of any one of Schuerch '765 or Weltz (US 5368826). The use of an "extraction system" or plural serially arranged UV modules is taught by either of Schuerch '765 or Weltz (US 5368826). To employ such features to facilitate module removal, cleaning reinsertion or to simply further treat the water for an added benefit would have been obvious to one of ordinary skill in the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas M. Lithgow whose telephone number is 571-272-1162. The examiner can normally be reached on Mon. -Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Thomas M. Lithgow  
Primary Examiner  
Art Unit 1724